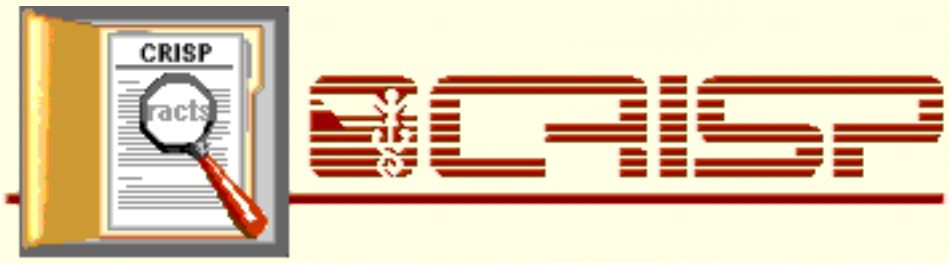
Version 2.0



Abstract

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Grant Number: 1R01NR005060-01A1

PI Name: BUTZ, ARLENE M.

PI Email: abutz@jhmi.edu

PI Title:

Project Title: NEBULIZER INTERVENTION IN MINORITY CHILDREN WITH ASTHMA

Abstract: *DESCRIPTION: Low-income minority children with asthma have disproportionately high utilization rates o f emergency department (ED) and hospital care compared to other children. Early and accurate identification of asthma symptoms linked with timely and appropriate asthma medication use is associated with decreased ED visits. In young children appropriate medication use includes accurate symptom perception and nebulizer use. In a pilot study of low-income minority children with symptomatic asthma we observed overuse of home nebulizer (48 percent), underuse of metered dose inhaler (MDI) with spacers (2.7 percent) and peak flow meter (17 percent). This study is designed to determine if an intensive home Nebulizer Education Intervention (NEI) will be associated with Aim 1: reduced asthma morbidity, Aim 2 improved parent and child asthma symptom identification; Aim 3: enhanced appropriate nebulizer medication adherence and Aim 4: demonstrate cost effectiveness as compared to children enrolled in a standard asthma education intervention (SAE). Difference in ED visits for asthma, hospital days, number of urgent and primary care visits, school absences, restricted activity, nighttime symptoms, functional status, quality of life over 18 month follow-up will be compared between the two groups (NEI and SAE). The Johns Hopkins ED will serve as our recruitment site. Families of children with moderate-severe asthma, ages 2-8 years (N = 220) with > 1 emergency room visit or a hospitalization for asthma care in the past 12 months and currently using a nebulizer will be enrolled. Data analysis will include chi square test, t-tests, ANOVA, and multivariate linear regression models. The Generalized Estimating Equation (GEE) will be used to address the correlation of repeated measures. Cost-effectiveness and cost benefit ratios will be generated to examine for differences in*

cost of care between groups. Study outcomes will provide important data on the effects of a NEI intervention for children with moderate to severe asthma, the relative cost of the intervention, and the major components required to meet the needs of children with moderate to severe asthma. Study findings will improve clinical care to this vulnerable population of children and will be if significant use to health care providers, researchers, insurers and policy makers.

Thesaurus Terms:
African American, asthma, health education, home health care, inhalation drug administration, low income
absenteeism, cost effectiveness, disease /disorder prevention /control, emergency care, functional ability, health care service availability, hospital length of stay, human morbidity, longitudinal human study, outcomes research, pediatric nursing, quality of life, respiratory disorder chemotherapy, restricted physical activity, therapy compliance clinical research, human subject, middle childhood (6-11), preschool child (1-5), questionnaire

Institution: JOHNS HOPKINS UNIVERSITY
3400 N CHARLES ST
BALTIMORE, MD 21218
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